

L Number	Hits	Search Text	DB	Time stamp
1	112	(peter near2 wolfgang).in.	USPAT; US-P PUB; EPO; JPO; DERWENT	2002/09/28 11:45
2	2	((edenhofer near2 besnd) (bouwman near2 jan near2 willem)).in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/28 11:46
3	113	((peter near2 wolfgang).in.) or (((edenhofer near2 besnd) (bouwman near2 jan near2 willem)).in.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/28 11:46
4	29902	(quenching cooling) near2 chamber	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/28 11:47
5	51006	(quenching cooling) near2 (gas gasous gases)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/28 11:47
6	53252	(quenching cooling) near2 (gas gaseous gases)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/28 11:48
7	53253	((quenching cooling) near2 (gas gasous gases)) or ((quenching cooling) near2 (gas gaseous gases))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/28 11:48
8	2780	((quenching cooling) near2 chamber) same (((quenching cooling) near2 (gas gasous gases)) or ((quenching cooling) near2 (gas gaseous gases)))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/28 11:48
9	2	(((peter near2 wolfgang).in.) or (((edenhofer near2 besnd) (bouwman near2 jan near2 willem)).in.)) and (((quenching cooling) near2 chamber) same (((quenching cooling) near2 (gas gasous gases)) or ((quenching cooling) near2 (gas gaseous gases))))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/28 11:50
10	111882	(gas gaseous gases) near2 (guide channel pipe conduit)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/28 11:52
11	178	(((quenching cooling) near2 chamber) same (((quenching cooling) near2 (gas gasous gases)) or ((quenching cooling) near2 (gas gaseous gases)))) same ((gas gaseous gases) n ar2 (guide channel pipe conduit))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/28 11:52

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(FILE 'HOME' ENTERED AT 12:33:37 ON 28 SEP 2002)

FILE 'WPIDS' ENTERED AT 12:33:44 ON 28 SEP 2002

E PETER WOLFGANG/IN
E PETER W/IN

L1 68 E3-7
E EDENHOFER B/IN
L2 21 E3
E BOUWMAN J/IN
L3 6 E3-5
L4 93 L1 OR L2 OR L3
L5 0 (COOL? OR QUENCH?) (1A) (CHAMBER DEVICE APPARATUS SYSTEM)
L6 22319 (COOL? OR QUENCH?) (1A) (GAS?)
L7 48293 (GAS?) (1A) (GUIDE? OR CONDUIT? OR PIP? OR TUB? OR CHANNEL?)
L8 1960 L6 AND L7
L9 59510 (COOL? OR QUENCH?) (1A) (CHAMBER? OR DEVICE? OR APPARATUS? OR SYS
L10 422 L8 AND L9
L11 9 L4 AND L6

AN 2002-001192 [01] WPIDS
DNC C2002-000564
TI Process for heat treating metallic workpieces comprises passing a **quenching gas** around the workpieces using guide channels in a quenching chamber.
DC M24
IN BOUWMAN, J; EDENHOFER, B; PETER, W
PA (IPSE-N) IPSEN INT GMBH
CYC 25
PI EP 1154024 A1 20011114 (200201)* DE 10p
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
RO SE SI

ADT EP 1154024 A1 EP 2000-108203 20000414

PRAI EP 2000-108203 20000414

AB EP 1154024 A UPAB: 20020105

NOVELTY - Process for heat treating metallic workpieces (20) comprises passing a **quenching gas** around the workpieces using guide channels (30).

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a device for heat treating metallic workpieces (20) comprising a quenching chamber (10), in which the workpieces are cooled using a **quenching gas** via guide channels (30). Preferred Features: The guide channels are reverse drawn before heating over the workpieces placed in a stack. The channels have a length which corresponds to the height of the workpieces.

USE - Used for heat treating metallic workpieces.

ADVANTAGE - The workpieces can be effectively heat treated.

DESCRIPTION OF DRAWING(S) - The drawing shows a cross-section through the quenching chamber.

quenching chamber 10

metallic workpieces 20

guide channels 30

Dwg.1/4

AN 1997-459836 [43] WPIDS
DNC C1997-146984
TI **Gas quenching** equipment for metal parts - with vertically adjustable gas nozzle plate to handle parts of varying size and form with optimum quenching performance.
DC M24
IN **PETER, W**
PA (IPSE-N) IPSEN INT GMBH
CYC 8
PI EP 796920 A1 19970924 (199743)* DE 8p
R: AT CH DE ES FR GB IT LI
EP 796920 B1 20010801 (200144) DE
R: AT CH DE ES FR GB IT LI
DE 59607412 G 20010906 (200152)
ES 2161317 T3 20011201 (200203)
ADT EP 796920 A1 EP 1996-110117 19960622; EP 796920 B1 EP 1996-110117 19960622; DE 59607412 G DE 1996-507412 19960622, EP 1996-110117 19960622; ES 2161317 T3 EP 1996-110117 19960622
FDT DE 59607412 G Based on EP 796920; ES 2161317 T3 Based on EP 796920
PRAI DE 1996-29603022 19960221
AB EP 796920 A UPAB: 19971030

Gas quenching equipment for metal parts, having a vertically adjustable nozzle plate (5) above the parts (3) arranged on a grid (2), allowing a substantially vertical flooding of the parts (3) with a **quenching gas**, the distance between the nozzle plate and the top surface of the parts (3) being variable up to 7 times the nozzle diameter d.

USE - For **gas quenching** of metal parts.

ADVANTAGE - Ensures optimum quenching performance for parts of varying size and form.

Dwg.1/3

AN 1993-110699 [14] WPIDS
DNN N1993-084308 DNC C1993-048687
TI Vacuum furnace for plasma carburising metallic parts - comprises furnace casing, heating chamber with electrical heating **cooling** gas ducts and blower for gas pressure minimum 10 bar.
DC M13 X25
IN EDENHOFER, B; FLEITER, A; SCHROEDER, J
PA (IPSE-N) IPSEN IND INT GMBH
CYC 9
PI EP 535319 A1 19930407 (199314)* DE 8p
R: AT CH DE ES FR GB IT LI SE
DE 4132712 A1 19930408 (199315) 8p
EP 535319 B1 19950614 (199528) DE 8p
R: AT CH DE ES FR GB IT LI SE
DE 4132712 C2 19950629 (199530) 6p
DE 59202520 G 19950720 (199534)
ES 2074773 T3 19950916 (199543)
ADT EP 535319 A1 EP 1992-112630 19920723; DE 4132712 A1 DE 1991-4132712
19911001; EP 535319 B1 EP 1992-112630 19920723; DE 4132712 C2 DE
1991-4132712 19911001; DE 59202520 G DE 1992-502520 19920723, EP
1992-112630 19920723; ES 2074773 T3 EP 1992-112630 19920723
FDT DE 59202520 G Based on EP 535319; ES 2074773 T3 Based on EP 535319
PRAI DE 1991-4132712 19911001
AB EP 535319 A UPAB: 19930924

Vacuum furnace for plasma carburising metallic parts in an electric field with a carbon contg. gas, having an electrical heating system, a vacuum pump for producing a vacuum in the heating chamber and gas inlets for **cooling gas** passed through a heat exchanger and circulated over the charge by a blower. The furnace casing and the blower are arranged for a minimum gas pressure of 10 bar for charge cooling and the gas inlets in the heating chamber are directed towards the charge.

The gas inlets are in the form of ducts (9) arranged on all sides of the heating chamber (6) and directed towards the charge (7). The heating elements (11) surround the heating chamber (6) on all sides in annular ring form. The heating chamber (6) is surrounded by an annular distribution chamber (10) for direction **cooling gas** to the gas inlets (9) and the gas is returned via the annular space (26) between jacket (18) and furnace casing (1). The furnace casing is connected to a storage vessel (21) contg. helium as **cooling gas** at a minimum pressure of 10 bar.

USE/ADVANTAGE - Improved vacuum furnace for plasma carburising which is more compact construction than other furnaces of this type.
1/2